Mr. Aaron Wiley
Kemira Chemicals, Inc.
315 N. Madison Street
Fortville, IN 46040

Dear Mr. Wiley:

Re: Exemption No. 059-16191-00009 and
Revocation of Part 70 No.: 059-7362-00009

The application from Kemira Chemicals, Inc., received on July 10, 2002, has been reviewed. The source has been operating under Part 70 Permit No. T059-7362-00009 issued on February 16, 2000. As of June 1, 2002, several emission units included in the Part 70 permit are no longer in operation. Thus the Part 70 permit is no longer necessary. In addition, the source, which was previously known as Vining industries, Inc., has been renamed as Kemira Chemicals, Inc. The source is being renamed as Kemira Chemicals, Inc., and the Part 70 Permit No. T059-7362-00009, issued to Vining Industries, Inc., is hereby revoked.

Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following emission units, to be located at 315 N. Madison Street, Fortville, Indiana, is classified as exempt from air pollution permit requirements:

(1) One (1) natural gas-fired low NOx boiler, with a maximum heat input capacity of 12.0 million British Thermal Units per hour (mmBtu/hr).

(2) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.

Cleaners and solvents characterized as follows: having a vapor pressure equal to or less than 2 kiloPascals; 15 millimeters of mercury; or 0.3 pounds per square inch measured at 38EC (100EF) or; having a vapor pressure equal to or less than 0.7 kiloPascals; 5 millimeters of mercury; or 0.1 pounds per square inch measured at 20EC (68EF); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.

The following conditions shall be applicable:

(1) Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuos opacity monitor in a six (6) hour period.

(2) Pursuant to New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60): 40 CFR Part 60.40c, Subpart Dc - Standards of Performance for Small Industrial-Commercial-

Institutional Steam Generating Units for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 100

mmBtu/hr or less , but greater than or equal to 10 mmBtu/hr:

(a) Under Subsection (a) of § 60.48c, the owner or operator of the boiler shall submit notification of the date of construction, or reconstruction, anticipated startup and actual startup as provided by § 60.7 of this part. The notification shall include:

(1) The design heat input capacity of the boiler and identification of the fuel to be combusted; and

(2) the annual capacity factor at which the owner or operator anticipates operating the boiler, based on all fuels fired and based on individual fuel fired.

(b) Under Subsection (g) § 60.48c, the owner or operator of the boiler shall maintain records of the amounts of fuel combusted during each month.

(c) Under Subsection (i) § 60.48, all records required in this Section shall be maintained by the owner or operator of the boiler for a period of two (2) years following the date of such record.

(3) Pursuant to 326 IAC 6-2-4 (Particulate Emissions Limitation for Sources of Indirect Heating), the PM emissions from the 12 mmBtu/hr natural gas-fired boiler, constructed after September 21, 1983, is limited to 0.57 lb/mmBtu.

(4) Pursuant to 326 IAC 8-3-2 (Organic Solvent Degreasing Operations), the owner or operator of the cold cleaner operations constructed after January 1, 1980, shall:

(a) Equip the cleaner with a cover;

(b) Equip the cleaner with a facility for draining cleaned parts;

(c) Close the degreaser cover whenever parts are not being handled in the cleaner;

(d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

(e) Provide a permanent, conspicuous label summarizing the operation requirements;

(f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a matter that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

(5) Pursuant to 326 IAC 8-3-5 (Organic Solvent Degreasing Operations), the owner or operator of cold cleaner degreaser facilities constructed after January 1, 1990 shall ensure that the following control equipment requirements are met:

(1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:

(A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));

(B) The solvent is agitated; or

(C) The solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.

(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(B) A water cover when solvent is used is insoluble in, and heavier than, water.

(C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

(6) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:

(1) Close the cover whenever articles are not being handled in the degreaser.

(2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.

(3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch

Office of Air Quality

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cc: File - Hancock County
Hancock County Health Department
Air Compliance - D. J. Knotts
Technical Support and Modeling - Michele Boner
Compliance Data Section - Karen Nowak

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Exemption

Source Background and Description

Source Name:	**Kemira Chemicals, Inc.**
Source Location:	**315 North Madison Street, Fortville, Indiana 46040**
County:	**Hancock**
SIC Code:	**2819**
Operation Permit No.:	**059-16191-00009**
Permit Reviewer:	**Madhurima D. Moulik**

The Office of Air Quality (OAQ) has reviewed an application from Kemira Chemicals, Inc., relating to the operation of an inorganic chemical production source. Several emission units at the source have been shut down as of June 1, 2002, and the source has been renamed (source was formerly known as Vining Industries, Inc.).

Emission Units and Pollution Control Equipment

The source consists of the following emission units and pollution control devices:

(1) One (1) natural gas-fired low NOx boiler, with a maximum heat input capacity of 12.0 million British Thermal Units per hour (mmBtu/hr).

(2) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.

Cleaners and solvents characterized as follows: having a vapor pressure equal to or less than 2 kiloPascals; 15 millimeters of mercury; or 0.3 pounds per square inch measured at 38EC (100EF) or; having a vapor pressure equal to or less than 0.7 kiloPascals; 5 millimeters of mercury; or 0.1 pounds per square inch measured at 20EC (68EF); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(a) Part 70 Permit No: T 059-7362-00009; Issued on February 16, 2000.

Several emission units included in Part 70 Permit No. T059-7362-00009 are no longer in operation as of June 1, 2002. As such, an exemption will be granted for the remaining boiler mentioned above, and the Part 70 No. T059-7362-00009 will be revoked. In addition, the source name will be changed from Vining Industries, Inc. to Kemira Chemicals, Inc.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on July 10, 2002.

Emission Calculations

See Appendix A of this document for detailed emissions calculations.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	0.1
PM-10	0.4
SO_2	Negligible
VOC	0.3
CO	4.4
NO_x	2.6

(1) The potential to emit (as defined in 326 IAC 2-7-1(29)) of pollutants are less than the levels listed in 326 IAC 2-1.1-3(d)(1). Therefore, the source is subject to the provisions of 326 IAC 2-1.1-3.

(2) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-1.1-3.

County Attainment Status

The source is located in Hancock County.

Pollutant	Status
PM-10	attainment
SO_2	attainment

NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Hancock County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Hancock County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year,
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
(c) any combination of HAPs is less than 25 tons/year.

This status is based on all the air approvals issued to the source.

Federal Rule Applicability

(1) New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60):
40 CFR Part 60.40c, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 100 mmBtu/hr or less , but greater than or equal to 10 mmBtu/hr.

The 12 mmBtu/hr natural gas-fired boiler is subject to § 60.48c Subsections (a), (g) and (i) of this NSPS.

(a) Under Subsection (a) of § 60.48c, the owner or operator of the boiler shall submit notification of the date of construction, or reconstruction, anticipated startup and actual startup as provided by § 60.7 of this part. The notification shall include:

(1) The design heat input capacity of the boiler and identification of the fuel to be combusted; and

(2) the annual capacity factor at which the owner or operator anticipates operating the boiler, based on all fuels fired and based on individual fuel fired.

(b) Under Subsection (g) § 60.48c, the owner or operator of the boiler shall maintain records of the amounts of fuel combusted during each month.

(c) Under Subsection (i) § 60.48, all records required in this Section shall be maintained by the owner or operator of the boiler for a period of two (2) years following the date of such record.

(2) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source. The degreasing operation, deemed an insignificant activity, is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), Subpart T (40 CFR 63.460-469) since no halogenated HAP solvents are used.

State Rule Applicability - Entire Source

326 IAC 2-4.1 (HAPs Major Sources: New Source Toxics Control)

This source is not a major source of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 2-6 (Emission Reporting)

This source is located in Hancock County and the potential to emit criteria pollutants is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 6-2-4 (Particulate Emissions Limitation for Sources of Indirect Heating)

This rule is applicable to indirect heating units constructed after September 21, 1983.
The 12 mmBtu/hr natural gas-fired boiler is subject to this rule. PM emissions limit is based on the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where: Pt = Pounds of particulate matter emitted per million Btu (lb/mmBtu) heat input.

Q = Total source maximum operating capacity rating in million Btu per hour (mmBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit, in which case, the capacity specified in the operating permit shall be used.

$$Pt = \frac{1.09}{Q^{0.26}}$$

$$= \frac{1.09}{(12)^{0.26}}$$

= 0.57 lb/mmBtu

Using Natural gas as fuel:
0.1 tons/yr (PM emissions fr. boiler) * 2000 lb/ton * yr/105.1 MMCF, throughput * MMCF/1000 mmBtu = 0.0019 lb/mmBtu < 0.57 lb/mmBtu. Therefore, the boiler is in compliance with this rule.

326 IAC 6-3-2 (Process Operations)

Boilers are exempted from this rule.

326 IAC 8-3-2 (Organic Solvent Degreasing Operations)

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the owner or operator of the cold cleaner operations constructed after January 1, 1980, shall:

(a) Equip the cleaner with a cover;

(b) Equip the cleaner with a facility for draining cleaned parts;

(c) Close the degreaser cover whenever parts are not being handled in the cleaner;

(d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

(e) Provide a permanent, conspicuous label summarizing the operation requirements;

(f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a matter that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

326 IAC 8-3-5 (Organic Solvent Degreasing Operations)

The parts washer at this facility does not include a remote solvent reservoir. Therefore, 326 IAC 8-3-5 is applicable.

(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of cold cleaner degreaser facilities constructed after January 1, 1990 shall ensure that the following control equipment requirements are met:

(1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:

(A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38^{E}C) (one hundred degrees Fahrenheit (100^{E}F));

(B) The solvent is agitated; or

(C) The solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38^{E}C) (one hundred degrees Fahrenheit (100^{E}F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an

internal type cannot fit into the cleaning system.

(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.

(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38^{E}C) (one hundred degrees Fahrenheit (100^{E}F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9^{E}C) (one hundred twenty degrees Fahrenheit (120^{E}F)):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(B) A water cover when solvent is used is insoluble in, and heavier than, water.

(C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

(b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:

(1) Close the cover whenever articles are not being handled in the degreaser.

(2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.

(3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

Conclusion

The operation of this inorganic chemical production source shall be subject to the conditions of the attached proposed Exemption No. 059-16191-00009.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler

Company Name: **Kemira Chemicals, Inc.**
Address City IN Zip: **315 North Madison Street, Fortville, Indiana 46040**
CP: **059-16191**
Plt ID: **059-00009**
Reviewer: **Madhurima D. Moulik**
Date: **22-Jul-2002**

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
12.0	105.1

Pollutant

	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	50.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.1	0.4	0.0	2.6	0.3	4.4

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

Small Industrial Boiler

HAPs Emissions

Company Name: **Kemira Chemicals, Inc.**

Address City IN Zip: **315 North Madison Street, Fortville, Indiana 46040**

CP: **059-16191**

Plt ID: **059-00009**

Reviewer: **Madhurima D. Moulik**

Date: **22-Jul-2002**

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	1.104E-04	6.307E-05	3.942E-03	9.461E-02	1.787E-04

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	2.628E-05	5.782E-05	7.358E-05	1.997E-05	1.104E-04

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.